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AUTHOR Wetstein, Matt
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ABSTRACT

A study explored rates of learning and political interest among students in the "Introduction to American Government" course at a community college. The study was sparked by calls for program review and outcomes assessment that are commonplace on contemporary American campuses. The study featured a pretest/posttest methodology and required students to fill out a 23-question survey of political knowledge and participation at the start and finish of the semester-long course. Results provide benchmarks for comparison and validate increasing levels of knowledge and interest in politics over the duration of the semester. The survey scores improved, on average, by 10% at the end of the semester, without any prompting that a test was forthcoming. More importantly, questions measuring interest and participation in politics also suggested an increased willingness on the part of the students to follow politics. Moreover, differences in scores between men and women that appeared at the start of the semester were no longer evident at the end of the semester, suggesting that the course may have had its most profound impact on changing levels of knowledge and interest among female students. Overall, findings suggest that students depart the course with an increased understanding of core political concepts and facts and express a greater interest in following political affairs and engaging in political activities. (Contains 7 tables of data, 4 notes, and 11 references.) (Author/BT)

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Assessment of Learning in the American Government Course: Results From a Pre-Test/Post-Test Methodology

Matt Wetstein
Division of Social Sciences
San Joaquin Delta College
5151 Pacific Avenue
Stockton, CA 95207
mwetstein@sjdccd.cc.ca.us

SO 029 854

Matthew Wetstein

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Abstract

This study explores rates of learning and political interest among students in the introduction to American Government Course at a community college. The study was sparked by calls for program review and outcomes assessment that are commonplace on contemporary American campuses. The study features a pre-test/post-test methodology, requiring students to fill out a 23 question survey of political knowledge and participation at the start and finish of the semester-long course. The results provide benchmarks for comparison, and validate increasing levels of knowledge and interest in politics over the duration of the semester. On average, student scores on the surveys improved by 10 percentage points at the end of the semester, without any prompting that a "test" was forthcoming. More importantly, questions measuring interest and participation in politics also suggest an increased willingness on the part of the students to follow politics. Moreover, differences in scores between men and women that appeared at the start of the semester were no longer evident at the end of the semester, suggesting the American Government course may have its most profound impact on changing levels of knowledge and interest among female students. Overall, the results suggest that students depart the course with an increased understanding of core political concepts and facts, and express a greater interest in following political affairs and engaging in political activities.

Introduction[1]

This study starts with a simple, yet troubling question: How do we know that students learn in the introductory American Government course? Perhaps more importantly, what specifically do students learn well, and what topics do they learn "not so well?" A simple, but perhaps troubling response to these questions might be: we know they learn because some of the students pass our exams and write passing papers. But a problem still lingers. The students who pass our courses might have come in with passing knowledge, and the students who fail may have entered with a paltry amount of knowledge in the first place. Thus, we cannot know if our instruction made the difference unless we have some indication of where the students were when they entered the class.

Political scientists are keenly aware that most students entering an introductory political science course come in with a very small knowledge base when it comes to basic political information. In one sense this study will validate what many professors find obvious on the first day of class, but it is worth reviewing some earlier studies. For example, a 1996 study indicated that only 5 percent of students entering an Introduction to American Government course knew that William Rehnquist was Chief Justice of the Supreme Court (Hibbing and Theiss-More 1996: 57). The same study found that 13 percent did not know Al Gore was Vice President of the United States. Expanding on the same theme, most American adults fail miserably when it comes to political knowledge questions. A 1996 Gallup Poll indicated that Americans were more likely to name the star of the Chicago Bulls (62%) and host of the Tonight Show (64%) than the Speaker of the House (52%) and the Attorney General (45%) of the United States (see Newport 1996: 20-21). The results were even worse for respondents in the 18-49 age bracket, where nearly 3/4ths could name Michael Jordan and Jay Leno, compared to the four in ten who could identify Janet Reno (for more political knowledge data, see Erikson and Tedin, 1995: 57). Clearly, these findings indicate that low levels of political knowledge and awareness are common problems that plague our society and our college students.

The limited knowledge base about politics has important ramifications for learning about American politics. One reason that students may not perform well in political science courses is that many of them enter the courses with a dread approaching that of news of cancer. For most students, the U.S. Government course is a state-imposed general education requirement at best, and at worst, a promise of a semester studying a topic they have little interest in, and in fact, may despise. Given the growing cynicism over the last twenty years, and the growing tendency of Americans to tune out to politics, student motivation to learn about U.S. politics is often perilously low. For example, the political disengagement of college freshman has been tracked by a UCLA survey since the late 1960s, and the findings are startling. In 1968, a whopping 58 percent of college freshmen said that "keeping up to date with political affairs is a very important or essential life goal" (Bronner, 1998: A10). In the 1997 survey, that figure was down to 27 percent (Bronner, 1998: A10). In addition, only 14 percent said they frequently talked about politics with friends and family. In short, college students in general dread politics and tend to avoid its messy connotations as often as possible.

This pattern of political apathy presents a formidable task for the educator charged to teach the American Government class, especially since the student's enrollment may represent the only shot that a student might have at learning the importance of civic engagement and political

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1 I am grateful to my colleagues in the Division of Social Science who agreed to participate in this study and administer the surveys (Dick Bastear, Chuck Bloch, Susan Hall, and Ernie Giannecchini). Bill Dofflemyer, the Chair of the Division, encouraged me to do this study, and I appreciate his willingness to discuss the strategies involved and to look over draft questions and reports.

participation. Precipitous drops in civic engagement by U.S. citizens has been widely reported, with one scholar coining the phrase that Americans are increasingly "bowling alone" rather than join civic groups and social organizations (see Putnam 1995). Membership in local civic groups has dropped by 25 to 50 percent over the last three decades, while measures of collective political participation have also declined (Putnam 1995, 666). Indeed, declining rates of civic engagement have led the American Political Science Association to form a task force for improving civic education in the high school, colleges and universities of this country (see APSA 1998). Given these trends, we may ultimately need measures of two factors of students entering our courses: 1) levels of knowledge, and 2) levels of interest and engagement in politics.

One way to solve this dilemma is to create some base-line measure of student knowledge and interest when they enter the course. An entire field of standardized testing in this country starts from this premise -- that there is a need to measure student knowledge and performance at benchmark time periods. In California, such standardized testing at each grade level (after the second grade) is being made public for the first time this year (see California Department of Education 1998). Demands from civic and political leaders have driven this movement in the hopes that published scores will spur education reforms that will lift scores in poor-performing districts.

At the college level, learning assessment is being adopted as a tool for program review and curriculum enhancement. Accreditation teams are demanding that curriculum decisions should be driven by needs and performance analysis. Integral to this effort is the move to measure outcomes as students leave college programs. Ironically, outcomes assessment is relatively new to political science programs, with only one in six departments having a program in place at the start of the 1990s, largely because regional accrediting agencies had called for such programs (Julian, Chamberlain, and Seay 1991, 206-207). Increasingly, political science departments are undergoing program reviews and implementing outcomes assessment programs to strengthen course offerings, and to justify the quality of their programs. It is this trend that sparked the current study.

In October of 1997, full-time faculty from the political science program at Delta College met to discuss a pre-test/post-test learning assessment study to measure knowledge and learning in the American Government and Institutions course. These discussions originated out of mandated program review studies that are now on-going at Delta College for all educational programs. While the political science program review is not scheduled to begin until Fall of 1998, the full-time faculty agreed to develop a pre-test/ post-test assessment questionnaire in order to gather data for the upcoming program review study. The faculty agreed to engage in a pilot project in the Spring of 1998. Sample questions for the survey were solicited, and a questionnaire was created for distribution on the first day of class. Three full-time faculty and two part-time faculty agreed to administer the surveys in their classes.

The study was designed to gather data for two main purposes. First, it measures the political knowledge and interest in politics that students have when they enroll in the American Government course. Second, it provides an assessment of knowledge and political interest at the end of the course. The pre-test/post-test format gives us a yardstick to measure whether, and how much students learn in our courses, and whether, and how much, student interest in politics is changed. Additionally, the structure of the survey allows us to determine if there are any systematic differences among students when they enter and leave the course, and in their learning capacity.

Data and Methods

The surveys asked questions about basic facts concerning U.S. government, theoretical approaches, core concepts in the discipline, knowledge of public officials, interest in politics, and rates of political participation. A list of the questions is provided in Table 1. The knowledge questions composed a panel of 23 questions, with 18 of them in "true/false" format, and five in the "fill in the blank" format. The political interest questions were essentially "yes or no" questions,

and were directly modeled after questions used by the institute responsible for the National Election Studies (The Institute for Social Research at the University of Michigan).

The research design is a simple pre-test/post-test design, with three different experimental groups.[2] Of the 14 sections offered in the Spring, 10 sections had pre-test surveys administered, for a total of 445 students in the initial phase of the study. The pre-test surveys were administered the first or second day of class, between January 12-16, 1998. At the end of the semester, 3 sections that did not complete a pre-test were asked to complete the "post-test," in addition to the students in the 10 sections already surveyed. Post-test surveys were identical to the pre-test instruments, and were completed by students the week before final exams (May 11-19, 1998). The methodology of the study resembles a classic experimental design, with a pre-test, an intervention -- in this case a semester of instruction -- and a post-test to measure the effects of the "intervention." This methodology allowed us to collect measures of learning and knowledge before and after the course, and determine if any student increases in performance might be due to a "test effect," or the possible knowledge that they would receive a similar test at the end of the semester.

This paper provides some initial findings from the pre-test and post-test surveys at an aggregate level. The next section outlines student performance on the knowledge questions, and overall performance on the two tests. That section is followed by a discussion of political interest and involvement among students enrolling in the class. Finally, some preliminary results are reported breaking down student performance on various demographic measures, success in prior American Government courses, and measures of political interest.

Results

Student Performance on the Pre-Test & Post-Test

Table 1 provides a breakdown of aggregate performance on the knowledge questions in the pre-test and post-test surveys. The results provide a listing of the percentage of correct answers for each of the questions in the survey. Table 2 suggests an average score on the 23 Pre-test questions was 53.8 percent, or roughly 12.5 out of 23 correct. On the pre-test, nearly 40 percent of the students scored below the 50 percent mark, and more than 90 percent scored at or below the 70 percent cut-off. Note that most of the questions were true/false in format, giving students a 50-50 chance of success in any guessing situation. In other words, the format of many of the questions produced higher scores than a multiple choice test. Thus, the mean score of 53.8 percent may have been lower using another testing format. It should also be noted that a "failing" average score is to be expected on the pre-test, since the course is designed to provide the knowledge that will help students gain an understanding of basic facts about American government, and the core concepts used to study it.

Aggregate results on the post-test improved by about 10 points, with a mean score of 64.8 (see Table 2). This may sound low for a post-test score, but it must be noted that students were not prompted in any way that a "test" was impending. Indeed, their performance on the second test can

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2 An effort was made to establish a control group that would not be exposed to the pre-test, and only receive the post-test. In this sense, students in three sections of American Government were not informed of the test and study until the end of the semester when they received the post-test. In the end, three separate groups existed, 1) students who took the pre-test, but not the post-test (either because of withdrawal or absence on the post-test date); 2) students who took only the post-test (either through random selection into one of the sections, or through entry into a section after the pre-test had been given); and 3) students who took both tests.

be considered an unannounced prelude to the final exam, and students clearly knew from the instructions on the survey that their performance level did not count in their final grade. Thus, the students were working strictly from recall, with no warning and no time for studying, so a 10 point jump on the post-test score is probably noteworthy. Several indicators of improvement can be seen. First, far fewer students scored below 50 percent on the post-test (only 18 percent compared to a whopping 38 percent on the pre-test). Second, while only 4 students scored above 80 percent on the pre-test, a total of 38 exceeded that score on the post-test. Moreover, if we use the modal score as an indicator of student performance, the most frequently received score jumped from 52 percent on the pre-test to 70 percent on the post-test. Clearly there is a pattern of learning here that has been quantified by the pre-test/post-test methodology.

INSERT TABLES 1 & 2 HERE

Students apparently found several questions relatively easy to answer, based on the overwhelming number of correct responses (see Table 1 for a breakdown of correct responses for each question). For example, even on the pre-test, 87 percent of the students correctly identified that presidents may only serve two full terms under the U.S. Constitution. By the end of the semester, 92 percent of the students answered that question correctly. Likewise, a relatively small percentage had difficulty recalling that Al Gore is the Vice President (82 percent on the pre-test, 87 percent on the post-test). At both phases of the study, roughly four out of five could correctly indicate that the U.S. Constitution has been amended more than ten times. On the other hand, overwhelming numbers had difficulty identifying the Chief Justice of the Supreme Court (only 2 percent could fill in this blank correctly at the start of the semester). This difficulty persisted even at the close of the semester, when only 26 percent could correctly fill in the blank with William Rehnquist.[3] This may reflect the ambivalence and lack of attention American students and citizens give toward their highest court, or that the Justices on the court might not have been stressed by some faculty in the study. However, it is intriguing to note that substantial numbers of students suggested that Clarence Thomas was the chief. This "volunteering" may have occurred because of a prior true/false question suggesting that Clarence Thomas is the Chief Justice of the Supreme Court (56 percent agreed with that false statement on the pre-test).

Students also had difficulty naming the Secretary of State (9 percent said Madeleine Albright at the pre-test phase). Despite this result, one indication of learning in the course is that more than a third could list the Secretary of State at the end of the semester, suggesting some important exposure to foreign policy had occurred for many of the students. Another positive note is the substantial increase in the percentage who could identify Newt Gingrich as Speaker of the House, up from 44 percent to 71 percent by the end of the semester.

Notable improvements took place on some conceptual questions as well. For example, at the pre-test phase, less than half of the students could correctly identify the false statement that the

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3 There are two things to note about the Chief Justice "fill-in-the-blank" question. First, by conscious design, a prior question had been inserted in the survey to inquire whether Clarence Thomas was the Chief Justice of the Supreme Court (true-false format). Overwhelming numbers of students reverted back to that question in their short-term memory to volunteer that Thomas was the Chief Justice on the fill-in-the-blank question. This occurred even at the post-test phase. It may be a residual of the question-order experiment, and/or a residual of hearing Thomas' name during lectures or readings about the confirmation process. Second, the interpretation of "correct" answers on the fill-in-the-blank question were quite liberal when it came to spelling of Chief Justice Rehnquist's name. One student wrote "Verne Lundquist," who happens to be a sports commentator, and not a noted conservative jurist. However, in the spirit of horseshoes and nuclear warfare, the Lundquist response was coded as a correct answer.

"re-drawing of congressional districts is called electioneering." At the end of the semester, after exposure to the concept of gerrymandering, a full 70 percent of the students answered this question correctly. A number of students wrote "gerrymandering" on the survey instrument to validate their learning of this concept. Significant improvements also showed up on a question dealing with pluralist theory, with an increase from 66 percent to 80 percent correct. Finally, at the start of the semester, a full two-thirds of the students confused the "separate but equal" doctrine from *Plessy v. Ferguson* and *Brown v. Board of Education* with the Declaration of Independence. By the end of the semester, only half the students failed to answer this correctly.

A couple of questions may deserve to be dropped or re-worded if the instrument is used again. For instance students might have been confused over the true/false question that reads: "The idea that the power to govern resides with the people (and is not derived from God) is a relatively new idea in the history of humanity." This is a question taken directly from a test bank for one of the leading U.S. Government texts, and while I would answer that as "true," noting that social contract theory is in fact a "relatively new idea in the history of humanity," others might argue that it depends on your interpretation of the phrase "relatively new." Students might easily conclude that 300 years-old is not "relatively new," and thus, may have been misled by the question wording. In the end, 56 percent of the students answered the way I would have on the post-test, while 44 percent said false. Another question -- based on Harold Lasswell's classic definition of politics as the study of "who gets what, when, and how" might also have been misleading for students with a different textbook definition of politics (49 percent answered true on the pre-test, with 59 percent saying true at the post-test phase). Still, most of the questions present no difficulty discerning a correct answer, and in many ways the questionnaire is a robust measure of basic political knowledge and understanding of concepts central to our discipline.[4]

Table 3 provides a brief description of student performance across the three groups in the study. Students who took only the pre-test scored slightly lower than those who took both tests (53.2 compared to 55.0). This difference is probably due to student attrition and withdrawal from the course, but even with this factor accounted for, the difference in mean scores at the pre-test phase was not statistically significant. Likewise, the 0.8 difference in mean scores between the post-test group and students who received both tests was statistically insignificant. Thus, the mean scores improved an average of 10 points at the end of the semester, with no test effect or maturation effect obvious in the data set.

INSERT TABLE 3 HERE

Political Interest and Involvement

The questions relating to political engagement and interest generated some interesting findings. These findings are summarized in Table 4. More than half of the students reported that they were registered to vote (56%) at the start of the semester, while 32 percent say they voted in the last presidential election. Since the sample of students is predominantly young (20 and under),

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4 There are some other criticisms that can be levied against the format and questions. First, the idea of a true-false, fill-in-the-blank format may cause concern for some professors who shy away from such testing methods. The format was chosen here with an eye toward brevity. Given a large number of students and limited time to administer the surveys, a short survey instrument made more practical sense than a written assignment or essay. One other criticism is that the survey instrument is long on basic facts, and short on theories and concepts. This criticism is valid, and one lesson learned from this pilot project is that more theory based questions are called for (i.e., questions on federalism, different notions of democracy, majority rule).

these figures of voter registration and participation are somewhat inflated. This would be in line with national surveys, where adults often over-report participating in elections, and voting for the winning candidate in order to look "socially responsible" to interviewers (see Yeric and Todd 1996: 35; Asher 1988). Perhaps even more inflated were responses to the question asking if they "followed the last presidential election race in the newspaper." Here, 52 percent of the pre-test respondents said that they did, which is a considerably high finding given that newspaper readership in this country among young adults is not that high. It is possible that students interpreted this question broadly, and may have mixed their television media exposure in with newspaper readership. More in line with national trends, only 12 percent of the students indicated that they had worn a campaign button, put a bumper sticker on their car, or a sign in their yard.

Post-test indicators of political interest and involvement turned up some increases in political interest. For instance, there was a seven percent increase in the reporting of voter registration. Some of this increase may be due to students over-reporting the "socially responsible" answer. Another factor may be that students were reaching the voting age for the first time, while some of the increase may be due to the attrition of the least politically motivated students from the sample. To test for this second effect, Table 5 lists the pre-test and post-test scores for students who completed both surveys (N=155). Here we see a 9 percent increase in reported voter registration. Students also reported greater frequency in talking about politics, and in displaying campaign materials. Moreover, there was a 10 point jump in students reporting that they "followed the election in the newspaper." This last set of findings is interesting because it may reflect students interest in the election that was ***upcoming*** in June 1998. That election generated significant interest because of two important propositions (pertaining to bilingual education and union political contributions), and because it represented the first open primary in California. At any rate, across five separate measures of political interest, there were indications of greater interest and participation in politics on the part of the students.

INSERT TABLES 4 & 5 HERE

The political trust and efficacy questions brought intriguing findings as well. At the beginning of the semester, nearly half of the students agreed with the statement that politicians don't really care about what "people like them" think. This finding fits with national data suggesting a deep reservoir of distrust of political institutions, and the widespread perception that politicians are, as David Mayhew has suggested, "single-minded seekers of re-election" (Mayhew 1974). Note that only 13 percent of the students surveyed trusted government to "do the right thing most of the time," while about 20 percent indicated that government "hardly ever" does what is right. Ironically, post-test scores on these two questions are not very different. In fact, the semester of instruction about American politics appears to have done little to alter the sentiments students have about trusting those who govern, and whether their attitudes matter. This is probably due to the fact that one of the staples of teaching in the American government course is the exposure of students to the over-arching influence of privileged elites in the policy process at the expense of common Americans, and politicians' apparent willingness to bend to that influence. Given descriptions of American politics from pluralist and elite perspectives, it is not surprising that student perceptions of trust and efficacy remain unaltered at the end of the semester.

Variables Explaining Student Success on the Pre-Test & Post-Test

Since the data gathered in the surveys include a set of variables that might explain varying levels of success on the pre-test and post-test, several hypotheses for student success can be explored. For example, it was expected that students who have greater levels of interest in politics and greater rates of participation would be more likely to score higher on the pre-test and post-test than those who do not. We might also expect students who followed the last election in the newspaper to be more politically engaged, and therefore better informed coming into the pre-test,

and perhaps even more prepared to excel on the post-test. It was also believed that younger students, on average, would perform at lower levels than older students, and that men would generally do better on the tests than women. Part of this is rooted in persistent stereotypes that exist in our society that discourage women from being politically active, while men are encouraged to voice their views about politics. Women in the Delta College sample might also face greater child-rearing burdens than men, further limiting their ability to devote time and attention to political issues and discourse. A listing of the hypotheses tested in this study is provided below.

H1: Students who say they are registered to vote will perform significantly better on the pre-test and post-test than those who are not.

H2: Students who say they voted in the last election will perform significantly better on the tests than those who did not vote.

H3: Students who say they followed the last election in the newspaper will perform significantly better on the tests than those who did not.

H4: Students who report that they have talked to people about who to vote for in the election will perform significantly better on the tests than those who did not.

H5: Students who feel disaffected about politics (believe that politicians don't care about what they think) will perform significantly worse on the tests than others.

H6: Students who have lower levels of trust in government will perform significantly worse on the tests than those who place more trust in government.

H7: Younger students will perform significantly worse on the tests than older students.

H8: Men will perform significantly better on the tests than women.

H9: For the pre-test, students who reported taking a U.S. Government class in the past will perform significantly better on the pre-test than those who have not. For the post-test phase, students who report getting better grades in the current semester will perform significantly better on the post-test.

The results from difference of means tests (ANOVA) are presented in Table 6 for both pre-test and post-test phases of the study. The test simply compares the mean scores found in each group, and makes a statistical calculation to determine if the means are far enough apart to be due to some non-random factor. Some of the more important findings include (see Table 6):

* Students who **followed the last election in the newspaper** scored almost 6 points higher on the pre-test than those who did not. At the post-test phase, the difference was a seven point improvement. In both cases, this is a statistically significant difference, and we can be 99% certain that the difference in results did not occur by chance. Not surprisingly, these findings suggest that students who enter the course with some past interest in politics and elections tend to do better in the course.

* At the pre-test phase, **men scored 5.5 points higher than women** (a statistically significant difference). An encouraging result appeared at the post-test stage, where women had narrowed the gap to a 1.8 difference in mean scores (a non-significant difference). Thus, after a semester of instruction, the gap in knowledge that appeared between men and women had essentially eroded, suggesting that exposure to the American Government course may have a more profound influence on women than men.

* Students who reported they **talked to others about who to vote for** performed 5 points better on the pre-test than those who did not (a statistically significant difference). At the post-test phase, this gap had widened slightly to a 7 point difference. The results suggest that students who are prone to talk about politics in the first place may get more out of the American Government course than those who are less prone to discuss politics, largely because they have a deeper reservoir of interest in the subject.

* Students who are **registered to vote** scored 2.5 percentage points higher on the pre-test than those who are not (a statistically significant difference). By the post-test phase, the difference between registered and non-registered students was nearly 7 points. This is an unsurprising finding, since we would expect registered voters to show more interest in a political science course than non-voters.

* Students who reported that they **voted in the last election** scored 3.6 percentage points higher on the pre-test than those who did not vote (a statistically significant difference). At the post-test, the difference was twice as large, with voters scoring 7.5 points higher on average.

* Stronger **performance in a prior American Government course** was positively related with performance on the pre-test. In other words, students who said they got an A in their prior course scored much higher than those who got a C or lower grade. At the post-test phase, students who reported that they were doing well in the course (expected an A) scored some 20 points higher than those expecting a D for the semester. This is not an earth shattering finding, but it does point out the fact that students who put more interest and effort into succeeding in the course do come away with greater levels of political knowledge than those who do not.

***Age** was not a significant factor at the pre-test phase, but there was a significant difference at the post-test phase, where those over 20 tended to score 4 points better than those 20 and younger. This finding might result from a greater interest on the part of older students to become more politically aware, and may also result from a greater level of maturity and focus in their studies.

INSERT TABLE 6 HERE

Table 7 provides an assessment of these variables in a multivariate context. The table suggests that students performance on the pre-test can be measured in part by sex, interest in politics, grade in a prior U.S. government course, age, and a measure of political efficacy. The regression equation featured in the table allows us to see the impact of each variable, even when controlling for the other variables in the equation. The estimates in the "b" column provide a measure of the change in the score that is attributable to a one-unit change in the variable listed at the left. Thus, a change of "one" on the sex variable (i.e., being a woman instead of a man), produces a 5.68 drop in the score on the pre-test -- even when controlling for the other variables. A measure of interest in politics also has a significant impact, producing a 2.3 point increase in test

scores for every additional political activity reported by the students. Student grades in prior courses also produced swings in the pre-test scores, with "A" students scoring on average 6.6 points higher than students reporting an "F."

INSERT TABLE 7 HERE

The post-test results in Table 7 indicate that while sex was a significant predictor of success at the pre-test stage, it no longer was at the post-test phase. The coefficient for sex suggests that men do score about 1.5 points higher than women (when controlling for other factors), but this is not a statistically significant difference. The three variables that appear to matter the most are 1) reported performance in the class, 2) interest in politics, and 3) age. The five variables in the post-test model explain 20 percent of the variance in the post-test scores (R Square = .21). While this is an impressive level of explained variance in the test scores, there is an indication that other important predictors of success are missing from the model.

Conclusion

This study began with purpose of validating learning in the U.S. Government course. To a great extent, that goal has been met. Using a pre-test/post-test methodology, students in Delta College's American Government course performed 10 points better (on average) at the end of the semester on a simple 23 question true-false, fill-in-the blank test. Significant gains in knowledge turned up on conceptual questions that go beyond basic political facts. While the test format may have some critics, it does represent one way of measuring improvement in knowledge of basic political facts and concepts.

Another significant finding from the study is that rates of political engagement and interest appear to rise with exposure to the American Government course. At the end of the semester, students are more likely to say they are registered to vote, more interested in following elections in the news, more likely to be engaged in campaign activities, and far more likely to talk about politics with others. These increasing levels of engagement and interest in politics may be the crowning virtue of the American Government course. These trends help to counteract an aging citizenry that is increasingly disaffected, disengaged and apathetic to politics. If the American Government course can cement a renewed interest in politics, and encourage greater levels of political and civic engagement by students throughout their lives, then we may see signs of renewed health for our democratic institutions.

Perhaps the most significant finding of the study is the impact that the American Government course appears to have on women who enroll in the class. On average, women at Delta College entered the American Government class with lower levels of political knowledge than men. Whether this stems from persistent stereotypes that discourage women from learning and talking about politics is unimportant. What is significant is that whatever barriers to political learning that do exist for women are essentially eliminated by the semester of instruction. On average, women scored 14 points higher at the end of the semester than they did at the start, while men improved at a rate of only 10 points. This significant improvement by women may represent one of the most important features of the U.S. Government course. The course may motivate women to learn more about politics, vote more often, and seek greater levels of political engagement in the community. Given the decline in civic engagement in recent decades, this significant boost in political learning by women may have a lasting impact on trends of political participation if women continue to pursue political learning in their post-college years.

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TABLE 1

Correct Responses to Political Knowledge Questions Ranked in Order of Question Difficulty on the Pre-Test

Question Wording	Correct Answer	% Correct Pre-Test	% Correct Post-Test
Presidents may only serve two full terms under the U.S. Constitution.	True	87	92
The Vice President of the United States is:	Gore	82	87
The Constitution of the United States has only been amended 10 times.	False	81	84
The Governor of California is:	Wilson	77	82
The only way that citizens can participate in politics is through voting.	False	74	85
Ideology is a central concept in the study of politics.	True	69	81
A pluralist theory of democracy would argue that government policies result from the competition of intensely interested groups over the law making process.	True	66	80
The First Amendment of the Constitution protects people from unreasonable searches and seizures in their homes.	False	66	78
The length of a U.S. Senator's term is six years.	True	63	66
The U.S. Secretary of State is selected by voters in election years when the president runs for office.	False	63	65
Supreme Court Justices serve 10 year terms in office.	False	60	81
The leader of the California Senate is called the Lieutenant Governor.	False	57	48
Proposition 209 allowed for the prescription of marijuana for medical purposes in California.	False	53	50
Political scientists study who gets what, when, and how in a society.	True	48	59

TABLE 1 CONTINUED

Question Wording	Correct Answer	% Correct Pre-Test	% Correct Post-Test
The idea that the power to govern resides with the people (and is not derived from God) is a relatively new idea in human history.	True	47	56
Re-drawing congressional districts for partisan advantage is called electioneering.	False	48	70
Clarence Thomas is Chief Justice of the Supreme Court.	False	46	55
The Speaker of the House of Representatives is:	Gingrich	44	71
There are 100 seats in the U.S. House of Representatives.	False	40	57
The Declaration of Independence justified America's rebellion from Britain on the basis of the separate but equal doctrine.	False	33	48
District boundaries for the U.S. House of Representatives are drawn by a Congressional committee.	False	23	32
The Secretary of State for the United States is:	Albright	9	36
The Chief Justice of the U.S. Supreme Court is:	Rehnquist	3	26

TABLE 2

Student Performance on the Pre-Test and Post-Test

Score on Pre-Test (% Correct)	Number of Students	Cumulative Percent	Score on Post-Test (% Correct)	Number of Students	Cum. Percent
13	1	.2	13	0	.0
22	3	.9	22	0	.0
26	3	1.8	26	1	.4
30	10	4.0	30	4	2.0
35	25	9.7	35	3	3.1
39	31	16.9	39	7	5.9
44	37	25.8	43	15	11.7
48	47	37.5	48	15	17.6
52	59	51.9	52	21	25.8
57	53	64.7	57	24	35.2
61	45	76.0	61	26	45.3
65	44	86.5	65	25	55.1
70	24	92.4	70	29	66.4
74	12	95.5	74	25	76.2
78	15	99.1	78	23	85.2
83	2	99.6	83	10	89.1
87	1	99.8	87	15	94.9
91	1	100.0	91	4	96.5
96	0	100.0	96	9	100.0
Mean = 53.8 Mode = 52.0	445	100.0	Mean = 64.8 Mode = 70.0	256	100.0

TABLE 3

Test Scores for Different Groups of Students in the Study

	Pre-Test % Correct	Semester of Instruction	Post-Test % Correct	N
Pre-Test Only	53.2	X	-	290
Pre-Test & Post-Test	55.0	X	64.5	155
Post-Test Only	-	X	65.3	101
Mean Across Groups	53.8	X	64.8	546

TABLE 4

Political Interest and Participation Responses at Pre-Test & Post-Test Phase (All Respondents)

Question	Percent Responding at Pre-Test	Percent Responding at Post-Test	Percent Change
Registered to Vote?			
Yes	58	65	+ 7
No	42	35	
Vote in Last Election?			
Yes	35	35	0
No	65	65	
Follow Election in Newspaper?			
Yes	51	60	+ 9
No	49	40	
Ever Wear a Campaign Button or Put Sticker on Car?			
Yes	12	18	+ 6
No	88	82	
Talk With others About Who to Vote For			
Yes	34	44	+10
No	65	56	
Don't Think Officials Care What People Like Me Think?			
Agree	48	45	- 3
Disagree	50	50	
Trust Government to do the Right Thing?			
Most of the time	13	16	+ 4
Some of the time	64	65	
Hardly ever	21	17	
Plan to Vote in June Primary?			
Yes	-	57	
Unsure	-	20	
No	-	22	

TABLE 5

Political Interest and Participation Responses at Pre-Test & Post-Test Phase (Students Completing Pre-Test and Post-Test Only, N=155)

Question	Percent Responding at Pre-Test	Percent Responding at Post-Test	Percent Change
Registered to Vote?			
Yes	56	65	+ 9
No	44	35	
Vote in Last Election?			
Yes	32	34	+ 2
No	68	66	
Follow Election in Newspaper?			
Yes	53	63	+ 10
No	46	37	
Ever Wear a Campaign Button or Put Sticker on Car?			
Yes	12	18	+ 6
No	88	82	
Talk With others About Who to Vote For			
Yes	41	47	+ 6
No	59	53	
Don't Think Officials Care What People Like Me Think?			
Agree	46	46	0
Disagree	52	53	
Trust Government to do the Right Thing?			
Most of the time	16	20	0
Some of the time	68	64	
Hardly ever	15	16	
Plan to Vote in June Primary?			
Yes	-	56	
Unsure	-	22	
No	-	22	

TABLE 6

Political Interest & Demographic Variables and Their Influence on Student Scores on the Pre-Test and Post-Test

Independent Variable	Mean Score on Pre-Test	F Statistic for Diff of Means	Mean Score on Post-Test	F Statistic for Diff of Means
Registered to Vote?				
Yes	54.7	4.3 *	66.9	12.0 **
No	52.1		60.1	
Vote Last Election?				
Yes	56.0	7.4 *	67.9	16.6 **
No	50.6		60.4	
Follow Election in Newspaper?				
Yes	56.3	21.7 **	67.4	14.0 **
No	50.6		60.3	
Talk About Who to Vote For?				
Yes	56.9	14.5 **	68.5	14.2 **
No	51.9		61.5	
Don't Think Officials Care What People Like Me Think				
Agree	52.2	4.3 *	62.0	10.1 **
Disagree	54.8		67.9	
Trust Govt to Do the Right Thing				
Most of time	54.6	0.3	63.9	3.0
Some of time	53.6		65.8	
Hardly ever	53.0		59.8	
Age				
20 & under	53.7	0.0	63.3	4.7 *
Over 20	53.5		67.3	
Sex				
Male	56.3	19.9 **	66.0	0.9
Female	50.8		64.2	
Grade in Prior U.S. Govt Class				
A	56.2	3.3 *		
B	53.7			
C	50.0			
D, F, or W	51.7			
Grade Expected in Current Class				
A			74.1	15.7 **
B			65.8	
C			59.7	
D			52.2	

* F statistic is significant at p .05, ** F statistic is significant at p .01

TABLE 7

Multivariate Regression Model Measuring the Influence of Variables on Students Scores at the Pre-Test and Post-Test Phase

Variable	PRE-TEST MODEL b	PRE-TEST MODEL stand. error	POST-TEST MODEL b	POST-TEST MODEL stand. error
Interest in politics	2.33	.50 **	1.57	.61 **
Sex	- 5.68	1.32 **	- 1.52	1.70
Grade in U.S. Govt	1.22	.70	5.60	1.04 **
Efficacy & Trust	1.29	.74	1.36	.96
Age	- .91	.80	2.37	.86 **
Constant	66.33	4.10	76.33	5.38
R Square	.13		.21	
F Statistic	10.37		13.06	
N	322		233	